WEST Search History

DATE: Thursday, January 09, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ			
L7	L6 not l5	2	L7
L6	L4 and @pd<20010515	14	L6
L5	L4 and @pd<20000515	12	L5
L4	transglutaminase and ammonium	15	L4
L3	transglutaminase same ammonium	14	L3
DB=USPT; PLUR=YES; OP=ADJ			
L2	L1 and @ad<20000515	24	L2
L1	transglutaminase same ammonium	26	L1

END OF SEARCH HISTORY

WEST Search History

DATE: Thursday, January 09, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ			
L6	L5 and @pd<20000515 not polynucleotide kinase	32	L6
L5	(label$4 near3 protein) and(kinase|transferase|ubiquitinase|transglutaminase)	59	L5
DB=USPT,PGPB; PLUR=YES; OP=ADJ			
L4	('6267957'| '6390821'| '6180379'| '6210914'| '6037134'| '5952011'| '5846998'| '5490980')[PN]	8	L4
L3	L2 not polynucleotide kinase	152	L3
L2	L1 and @ad<20000515	169	L2
L1	(label$4 near3 protein) with (kinase|transferase|ubiquitinase|transglutaminase)	221	L1

END OF SEARCH HISTORY

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* * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 10:35:54 ON 09 JAN 2003

=> index bioscience
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS,
       BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT,
       CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE,
       DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 10:36:01 ON 09 JAN 2003

64 FILES IN THE FILE LIST IN STNINDEX

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=> s transglutaminase (5a) (ammonia or ammonium)
          1   FILE ANABSTR
          5   FILE BIOSIS
          2   FILE BIOTECHNO
          1   FILE CABA
         12   FILE CAPLUS
  19 FILES SEARCHED...
          2   FILE EMBASE
          1   FILE ESBIOBASE
          2   FILE FROSTI
          2   FILE IFIPAT
  42 FILES SEARCHED...
          2   FILE MEDLINE
          2   FILE PASCAL
          2   FILE SCISEARCH
         10   FILE USPATFULL
          2   FILE WPIDS
  63 FILES SEARCHED...
          2   FILE WPINDEX

  15 FILES HAVE ONE OR MORE ANSWERS,   64 FILES SEARCHED IN STNINDEX

L1   QUE TRANSGLUTAMINASE (5A) (AMMONIA OR AMMONIUM)

=> d rank
F1          12   CAPLUS
F2          10   USPATFULL
F3           5   BIOSIS
F4           2   BIOTECHNO
F5           2   EMBASE
F6           2   FROSTI
F7           2   IFIPAT
F8           2   MEDLINE
F9           2   PASCAL
F10          2   SCISEARCH
F11          2   WPIDS
F12          2   WPINDEX
F13          1   ANABSTR
F14          1   CABA
F15          1   ESBIOBASE


=> file f1 f2-11 f13-15
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                                                       ENTRY    SESSION
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=> s l1 and py<2001
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   6 FILES SEARCHED...
   9 FILES SEARCHED...
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L2          34 L1 AND PY<2001

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3           18 DUP REM L2 (16 DUPLICATES REMOVED)
                ANSWERS '1-8' FROM FILE CAPLUS
                ANSWERS '9-11' FROM FILE USPATFULL
                ANSWERS '12-14' FROM FILE BIOSIS
                ANSWERS '15-16' FROM FILE FROSTI
                ANSWER '17' FROM FILE IFIPAT
                ANSWER '18' FROM FILE WPIDS

=> d bib abs 1-18

L3   ANSWER 1 OF 18  CAPLUS  COPYRIGHT 2003 ACS        DUPLICATE 3
AN   1991:244282  CAPLUS
DN   114:244282
TI   Identification of transglutaminase activity in the leaves of silver beet
     (Beta vulgaris L.)
AU   Signorini, Marco; Beninati, Simone; Bergamini, Carlo M.
CS   Ist. Chim. Biol., Univ. Ferrara, Ferrara, 44100, Italy
SO   Journal of Plant Physiology (  ***1991***  ), 137(5), 547-52
     CODEN: JPPHEY; ISSN: 0176-1617
DT   Journal
LA   English
AB   Leaves of silver beet (B. vulgaris) contain enzymes which catalyze the
     incorporation of primary amines into endogenous and exogenous proteins.
     Upon acid hydrolysis of proteins labeled with 14C-putrescine, almost all
     the radioactivity was recovered as the original amine.  A considerable
     fraction of the label was present as glutaminyl-putrescine deriv. in
     isopeptide bond after exhaustive degrdn. of labeled proteins with
     proteolytic enzymes.  These results suggest the presence of
     transglutaminases in plant tissues.  This conclusion was supported by the
     demonstration that the reaction was stimulated by calcium ions, although
     not abs. dependent on the cation, and that it was inhibited by recognized
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transglutaminase substrates and by ***ammonium*** ions. The enzymes were found to be a[redacted]cd. with the cell particulate f[redacted]ction and were probably intrinsic me[redacted]rane proteins because detergents were required for solubilization of the activity. Peptides of apparent mol. mass of 65,000 daltons by SDS-PAGE were identified as organelle-assocd. endogenous substrates.

L3 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 4
AN 1986:125473 CAPLUS
DN 104:125473
TI Modification of ***transglutaminase*** assay: use of ***ammonium*** sulfate to stop the reaction
AU Takagi, Junichi; Saito, Yuji; Kikuchi, Takashi; Inada, Yuji
CS Lab. Biol. Chem., Tokyo Inst. Technol., Tokyo, 152, Japan
SO Analytical Biochemistry (***1986***), 153(2), 295-8
CODEN: ANBCA2; ISSN: 0003-2697
DT Journal
LA English
AB An important modification was made of the assay for transglutaminase regarding dansyl cadaverine incorporation into casein. It is known that the amine, after incorporation into protein by transglutaminase, shows a marked increase of fluorescence accompanied by a slight blue shift. However, measurement of protein-bound fluorescence requires a rather complicated procedure, such as the pptn. by TCA or continually monitoring the fluorescence. To widen the applicability of the method, an excess concn. of (NH4)2SO4 was used to stop the reaction. At concns. of >5 mM, the incorporation of the amine was completely stopped and the fluorescence was retained for >2 h. The fluorescence could be measured directly after stopping the reaction, so it was feasible to assay many samples at a time. Furthermore, the sensitivity and reproducibility of the data were improved, since the reaction time could be prolonged and strictly defined.

L3 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2003 ACS
AN 1997:18359 CAPLUS
DN 126:42690
TI Inhibitors of fibrin crosslinking and/or transglutaminases
IN Sawyer, Roy T.; Wallis, Robert B.; Seale, Lisa; Finney, Sarah
PA Biopharm Research and Development Limited, UK; Sawyer, Roy T.; Wallis, Robert B.; Seale, Lisa; Finney, Sarah
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9634890	A2	19961107	WO 1996-GB1093	19960507 <--
	WO 9634890	A3	19971023		
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
	CA 2220268	AA	19961107	CA 1996-2220268	19960507 <--
	AU 9656546	A1	19961121	AU 1996-56546	19960507 <--
	AU 723130	B2	20000817		
	EP 848719	A2	19980624	EP 1996-913623	19960507 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	CN 1187201	A	19980708	CN 1996-194644	19960507 <--
	JP 11505218	T2	19990518	JP 1996-533139	19960507 <--
	BR 9608207	A	20001031	BR 1996-8207	19960507 <--
	NO 9705080	A	19980102	NO 1997-5080	19971104 <--
	US 6025330	A	20000215	US 1998-945998	19980514 <--
PRAI	GB 1995-9271	A	19950505		
	WO 1996-GB1093	W	19960507		

OS MARPAT 126:42690
AB A polypeptide (Tridegin) of mol. wt. of .apprx. 7000-8000 daltons, which inhibits transglutaminase activity and/or fibrin crosslinking, is isolated from tissue or secretions of the leech of the order Rhynchobdellida and purified by chromatog. methods. Because of extreme potency of polypeptides in the nanomolar range, they can be used to treat a no. of diseases where protein crosslinking is important, such as thromboembolic disease. They can be used for the treatment of Crohn's disease, tumor implantation, atherosclerosis, thrombotic microangiopathy, fibrous growths of the skin, acne, scar formation, membranous glomerulonephritis,

cataracts, or infection with microfilarial nematodes. In particular, they can be used to reduce the [redacted]bility of thrombi so that they [redacted]e more susceptible to lysis by th[redacted]mbolytic agents.

L3 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2003 ACS
AN 1996:710736 CAPLUS
DN 126:28809
TI Test reagent containing transglutaminase for determination of glutamine in peptide or protein
IN Yakabe, Takashi; Kawakami, Hiroshi; Idota, Tadashi
PA Snow Brand Milk Prod Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08256795	A2	19961008	JP 1995-69108	19950328 <--
PRAI JP 1995-69108		19950328		

AB Glutamine in peptide or protein is detd. by treating peptide or protein sample with reagent comprising ***transglutaminase*** and quantitating the produced ***ammonia*** .

L3 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2003 ACS
AN 1996:18645 CAPLUS
DN 124:54100
TI Inhibitory factors of transglutaminase in salted salmon meat paste
AU Wan, Jianrong; Kimura, Ikuo; Seki, Nobuo
CS Lab. Food Biochem., Hokkaido Univ., Hokkaido, 041, Japan
SO Fisheries Science (***1995***), 61(6), 968-72
CODEN: FSCIEH; ISSN: 0919-9268
PB Japanese Society of Fisheries Science
DT Journal
LA English
AB Transglutaminase (TGase) plays an important role in the formation of set gel and subsequent final surimi-based products with greater elasticity and water-holding capacity from salted surimi paste. In salmon surimi paste, however, the enzyme activity was inhibited even in the presence of a sufficient concn. of Ca2+ required for full activation. It was found that water sol. muscle proteins did not inhibit TGase activity, while deproteinized muscle ext. markedly inhibited the enzyme activity and depressed TGase-induced crosslinking and gelation of salmon actomyosin. The deproteinized salmon muscle ext. contained a large amt. of anserine as a major nitrogen compd. Anserine inhibited TGase activity, but its inhibitory action was slightly lower than that of the muscle ext. However, the redn. of TGase-induced crosslinking of myosin heavy chain and gelation of actomyosin by anserine was to the same extent as that by the muscle ext.

L3 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2003 ACS
AN 1994:629258 CAPLUS
DN 121:229258
TI Influence of ammonium salt on the formation of pressure-induced gel from walleye pollack surimi
AU Shoji, Tamotsu; Saeki, Hiroki; Wakameda, Atsushi; Nonaka, Michio
CS Central Research Institute, Maruha Corporation, Tsukuba, 300-42, Japan
SO Nippon Suisan Gakkaishi (***1994***), 60(1), 101-9
CODEN: NSUGAF; ISSN: 0021-5392
DT Journal
LA Japanese
AB To investigate the effect of ammonium ion on the quality of pressure-induced gel, walleye pollack surimi (meat paste) was ground with NaCl, or NaCl contg. a small amt. of (NH4)2SO4 or NH4Cl. The salt-ground meat was then compressed under 300 MPa at 0.degree. for 10 min followed by storage at 5.degree. for 120 h, and breaking strength and breaking strain together with subunit compn. of myofibrillar protein were evaluated. Transglutaminase activities and .epsilon.-(.gamma.-glutamyl) lysine contents were also measured. The results obtained were as follows: (1) transglutaminase activity of the salt-ground meat was mostly inactivated by the pressure-treatment, (2) the rates of formation of cross-linked myosin heavy chain (60% of total protein) and of .epsilon.-(.gamma.-glutamyl) lysine (2.7 mg/g) in the pressure-induced gel were virtually identical with those in the setting gel from the same surimi, (3) the breaking strength of the pressure-induced gel reached more than twice that of the setting gel, (4) addn. of ammonium salts to the salt-ground meat largely suppressed the formation of cross-linked myosin heavy chain and of

.epsilon.-(.gamma.-glutamyl) lysine, while the breaking strength of the pressure-induced gel remained at half the level of that of the gel formed without ammonium salts. These results suggested that intermol. hydrophobic interaction between myofibrillar proteins, which were formed through the pressure-treatment, and might contribute to the prodn. of an elastic gel.

L3 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2003 ACS
AN 1995:30648 CAPLUS
DN 122:259462
TI Factors that influence factor XIIIa catalytic activity in vivo. Effects of thiols and albumin
AU Chung, Soo Il; Galanakis, Dennis; Folk, J. E.
CS Natl. Inst. Dent. Res., Bethesda, MD, 20892, USA
SO Factor XIII, Int. Conf., 2nd (***1993***), Meeting Date 1991, 31-9. Editor(s): McDonagh, Jan; Seitz, Rainer; Egbring, Rudolf. Publisher: Schattauer, Stuttgart, Germany.
CODEN: 60HEAN
DT Conference
LA English
AB Fibrin stability in vivo is influenced by the extent of fibrin chain crosslinking catalyzed by factor XIIIa, and the crosslinking reaction of fibrin is greatly affected by the medium in which the fibrin clot is formed. The effects of reducing agents and plasma proteins in the medium on the catalytic activity of factor XIIIa were examd. in vitro, utilizing substrates ranging from simple amides to polypeptides. Factor XIIIa activity (***transglutaminase***), measured either by ***ammonia*** release from the carboxamide group of the glutamine residue (acylation) or by [14C]methylamine incorporation into the glutamine residue (acyl transfer) of the polypeptide substrate (the acetylated B chain of oxidized insulin) was increased several fold in the presence of sulfhydryl groups. Neither preincubation of the enzyme nor of the polypeptide substrate with sulfhydryl agents resulted in any enhancement of catalytic activity. Kinetic studies carried out with the acetylated B chain of oxidized insulin showed that kcat, but not Km, was affected by thiols in both the ammonia release and emthylamine incorporation steps. Reconstitution of serum devoid of factor XIIIa activity with purified fibrinogen induced an acceleration of [14C]methylamine incorporation into fibrin. Albumin was identified as the component chiefly responsible for such enhancement of factor XIIIa-catalyzed methylamine incorporation into fibrin. Albumin also induced acceleration of the fibrin crosslinking reaction, as measured by .gamma.-.gamma. chain dimer formation. These findings suggest that factors in physiol. fluids, e.g. thiol groups (glutathione) and albumin, are involved in the regulation of fibrin stability in vivo.

L3 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2003 ACS
AN 1993:58373 CAPLUS
DN 118:58373
TI Effects of salts on transglutaminase-mediated cross-linking of myosin in suwari gel from walleye pollack
AU Wan, Jianrong; Seki, Nobuo
CS Fac. Fish., Hokkaido Univ., Hakodate, 041, Japan
SO Nippon Suisan Gakkaishi (***1992***), 58(11), 2181-7
CODEN: NSUGAF; ISSN: 0021-5392
DT Journal
LA Japanese
AB Salted surimi pastes were prepd. either with each of NaCl, KCl, and NH4Cl, or with a mixt. of the salts at pH 7.0 and a const. ionic strength (I = 0.6) in the presence or absence of monodansyl cadaverine (MDC). They were incubated at 25.degree. for several h (suwari gel) and then heated at 90.degree. for 20 min (cooked gel). The gels produced were analyzed by measuring the breaking strength and amts. of crosslinked myosin heavy chain and incorporated MDC as a probe of transglutaminase activity. The breaking strength of the directly heated gels contg. NaCl and KCl at various ratios was almost const., whereas those of the suwari and cooked gels increased in proportion to the increasing ratio of NaCl to KCl. A similar NaCl-dependent increase was found in the amts. of crosslinked myosin heavy chain and incorporated MDC. The breaking strength of suwari and cooked gels was strongly depressed by a small amt. of NH4Cl (in the mM range) contained in NaCl at a total ionic strength of I = 0.6 with a concomitant decrease in the amts. of cross-linked myosin heavy chain and incorporated MDC.

L3 ANSWER 9 OF 18 USPATFULL DUPLICATE 1
AN 2000:18415 USPATFULL
TI Inhibitors of fibrin cross-linking and/or transglutaminases
IN Sawyer, Roy T., Hendy, United Kingdom

Wallis, Robert B., Carmarthen, United Kingdom
Seale, Lisa, Swansea, United Kingdom
Finney, Sarah, Tondu, United Kingdom
PA BioPharm Research & Development Ltd., Jersey, United Kingdom (non-U.S. corporation)
PI US 6025330 20000215 <--
WO 9634890 19961107 <--
AI US 1998-945998 19980514 (8)
WO 1996-GB1093 19960507
19980514 PCT 371 date
19980514 PCT 102(e) date
PRAI GB 1995-9271 19950505
DT Utility
FS Granted
EXNAM Primary Examiner: Woodward, Michael P.; Assistant Examiner: Delacroix-Muirheid, C.
LREP Kohn & Associates
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 1186
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The inhibitors, obtainable from tissue or secretions of leeches typically of the order Rhynchobdellida, has the following terminal sequence: NH.sub.2 -Lys-Leu-Leu-Pro-Cys-Lys-Glu-Y-His-Gln-Gly-Ile-Pro-Asn-Pro-Arg- wherein Y represents any amino acid sequence; or a pharmaceutically acceptable salt, derivative or bioprecursor of said sequence, or an analogue or homologue thereof. Because of their extreme potency in the nanomolar range, they can be used to treat a number of diseases where protein cross-linking is important. They can be used for the treatment of Crohn's disease, tumor implantation, atherosclerosis, thrombotic microangiophathy, fibrous growths of the skin, acne, scar formation, membranous glomerulonephrits, cataracts, or infection with microfilarial nematodes. In particular, they can be used to reduce the stability of thrombi so that they are more susceptible to lysis by thrombolytic agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 10 OF 18 USPATFULL
AN 2000:102086 USPATFULL
TI Microbial transglutaminases, their production and use
IN Bech, Lisbeth, Hiller.o slashed.d, Denmark
N.o slashed.rrevang, Iben Angelica, Aller.o slashed.d, Denmark
Halkier, Torben, Birker.o slashed.d, Denmark
Rasmussen, Grethe, K.o slashed.benhavn NV, Denmark
Schafer, Thomas, Farum, Germany, Federal Republic of
Andersen, Jens T.o slashed.nne, N.ae butted.rum, Denmark
PA Novo Nordisk A/S, Bagsv.ae butted.rd, Germany, Federal Republic of (non-U.S. corporation)
PI US 6100053 20000808 <--
WO 9606931 19960307 <--
AI US 1997-793426 19970225 (8)
WO 1995-DK347 19950828
19970225 PCT 371 date
19970225 PCT 102(e) date
PRAI DK 1994-990 19940826
DK 1995-947 19950824
DT Utility
FS Granted
EXNAM Primary Examiner: Prouty, Rebecca E.; Assistant Examiner: Slobodyansky, Elizabeth
LREP Zelson, Esq., Steve T., Green, Esq., Reza
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 2225
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Transglutaminase preparations are producible by a wide range of fungi, especially ascomycotina, basidiomycotina and zygomycota, and gram-negative and gram-positive bacteria, especially Streptomyces lydicus, NRRL B-3446. A DNA construct encoding a novel transglutaminase and comprising the DNA sequence obtainable from the plasmid in E. coli, DSM 10175, is also described together with a method of producing the transglutaminases, a composition comprising the transglutaminase and a method for producing a gel or protein gelation composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 11 OF 18 USPATFULL
AN 1998:36566 USPATFULL
TI Transglutaminase originating from Crassostrea gigas
IN Sano, Kohichiro, Kawasaki, Japan
Kumazawa, Yoshiyuki, Kawasaki, Japan
Yasueda, Hisashi, Kawasaki, Japan
Seguro, Katsuya, Kawasaki, Japan
Motoki, Masao, Kawasaki, Japan
PA Ajinomoto Co., Inc., Tokyo, Japan (non-U.S. corporation)
PI US 5736356 19980407 <--
WO 9520662 19950803 <--
AI US 1995-525654 19950928 (8)
WO 1995-JP117 19950130
19950928 PCT 371 date
19950928 PCT 102(e) date
PRAI JP 1994-8283 19940128
JP 1995-3876 19950113
DT Utility
FS Granted
EXNAM Primary Examiner: Patterson, Jr., Charles L.; Assistant Examiner: Bugaisky, Gabriele E.
LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 18 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 2086
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a transglutaminase originating from Crassostrea gigas, a gene coding for the transglutaminase, a plasmid carrying the gene, a microorganism transformed with the plasmid, a method for producing an intended transglutaminase by cultivating the microorganism and a method for gelating a protein using the transglutaminase originating from Crassostrea gigas. When comparing with other transglutaminases, the transglutaminase originating from Crassostrea gigas has novel characteristic properties such that it can be activated by the action of calcium ions and that it is further activated by the addition of sodium chloride and/or potassium chloride and it is of utility value, in particular, as a gelling agent for foods.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 12 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
AN 2001:431948 BIOSIS
DN PREV200100431948
TI A modified, optimized kinetic photometric assay for the determination of blood coagulation factor XIII activity in plasma.
AU Karpati, Levente; Penke, Botond; Katona, Eva; Balogh, Istvan; Vamosi, Gyorgy; Muszbek, Laszlo (1)
CS (1) Department of Clinical Biochemistry and Molecular Pathology, Medical and Health Science Center, University of Debrecen, Debrecen, H-4012: muszbek@jaguar.dote.hu Hungary
SO Clinical Chemistry, (***December, 2000***) Vol. 46, No. 12, pp. 1946-1955. print.
ISSN: 0009-9147.
DT Article
LA English
SL English
AB Background: Blood coagulation factor XIII (FXIII) is a zymogen that is transformed into an active transglutaminase by thrombin and Ca2+. FXIII plays an essential role in fibrin stabilization and in the protection of fibrin from proteolytic degradation. No convenient method has been available for the measurement of FXIII activity in plasma. The aim of the present study was to improve and optimize a kinetic photometric FXIII assay originally developed in our laboratory. Methods: In the assay, FXIII was activated by thrombin and Ca2+. Fibrin polymerization was prevented by an inhibitory tetrapeptide. Glycine-ethyl ester and a glutamine residue of a synthetic dodecapeptide served as acyl acceptor and acyl donor ***transglutaminase*** substrates, respectively. The amount of ***ammonia*** released during the reaction was monitored using glutamate dehydrogenase and NADPH. Results: The use of a new glutamine substrate and optimization of activator and substrate concentrations increased sensitivity. Substitution of NADPH for NADH and introduction of an appropriate blank eliminated systemic overestimation of FXIII activity. The recovery of FXIII was 96%, the assay was linear up to 470 U/L, the

detection limit was 1 U/L, and the imprecision (CV) was <8% even at very low FXIII activities. A reference interval of 108-224 U/L ([redacted]143%) was established. The results correlated well with results obtained by an immunoassay specific for plasma FXIII. Conclusions: The optimized FXIII assay is a simple, rapid method for the diagnosis of inherited or acquired FXIII deficiencies and increased FXIII concentrations. It can be easily adapted to clinical chemistry analyzers.

L3 ANSWER 13 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1985:369192 BIOSIS
DN BA80:39184
TI UPTAKE AND DEGRADATION OF INSULIN AND ALPHA-2 MACROGLOBULIN-TRYPSIN COMPLEX IN RAT ADIPOCYTES EVIDENCE FOR DIFFERENT PATHWAYS.
AU GLIEMANN J; SONNE O
CS INST. PHYSIOLOGY, UNIV. AARHUS, UNIVERSITETSPARKEN, DK-8000 AARHUS C, DEN.
SO BIOCHIM BIOPHYS ACTA, (1985) 845 (1), 124-130.
CODEN: BBACAQ. ISSN: 0006-3002.
FS BA; OLD
LA English
AB The cell association and degradation of insulin and .alpha.2-macroglobulin-trypsin complex were measured in rat adipocytes with or without various inhibitors in the attempt to clarify whether the 2 ligands were taken up by the same or by different pathways. Several inhibitors, and particularly those of membrane traffic, lysosomal function and transglutaminase activity, affected the 2 ligands differently. Chloroquine (100 .mu.M) reduced both the uptake of .alpha.2-macroglobulin .cntdot. trypsin and its receptor-mediated degradation by .apprx. 70%. The uptake of insulin was increased 2-3 times and the receptor-mediated degradation was only slightly reduced. Methylamine (10 mM) and ammonium chloride (10 mM) reduced degradation of .alpha.2-macroglobulin .cntdot. trypsin markedly without affecting that of insulin. Leupeptin (100 .mu.M) increased uptake and reduced degradation of .alpha.2-macroglobulin .cntdot. trypsin without affecting insulin. Dansylcadaverine (500 .mu.M) almost abolished uptake and degradation of .alpha.2-macroglobulin .cntdot. trypsin but had little effect on insulin. Uptake and degradation of .alpha.2-macroglobulin .cntdot. trypsin was much more sensitive than insulin to the action of metabolic inhibitors such as dinitrophenol and cyanide. The 2 ligands are taken up by functionally different systems. They support the hypothesis that lysosomes play a relatively minor role in the receptor-mediated degradation of insulin.

L3 ANSWER 14 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1985:284849 BIOSIS
DN BA79:64845
TI KINETIC DETERMINATION OF BLOOD COAGULATION FACTOR-XIII IN PLASMA.
AU MUSZBEK L; POLGAR J; FESUS L
CS DEP. CLINICAL CHEM., UNIV. SCH. MED., P.O. BOX 40, DEBRECEN, H-4012, HUNGARY.
SO CLIN CHEM, (1985) 31 (1), 35-40.
CODEN: CLCHAU. ISSN: 0009-9147.
FS BA; OLD
LA English
AB A new kinetic assay for estimating factor XIII in plasma [from humans] was described. Plasma fibrinogen was removed by treatment with bentonite (colloidal aluminum silicate) before measurement. During the lag phase, factor XII was transformed by thrombin and Ca2+ into active transglutaminase (EC 2.3.2.13), which attaches the substrate ethylamine to a Gln residue in acetylated, dephosphorylated .beta.-casein. During the reaction, ammonia is released, which can be continuously monitored in an NADPH-dependent indicator reaction catalyzed by glutamate dehydrogenase (EC 1.4.1.4). The optimal concentrations of substrate and activator was determined. It was found that, to eliminate the clottable fibrinogen from the plasma samples, bentonite treatment was more advantageous than the traditional heat treatment. Result correlate well with those by the most widely used amine incorporation and immunoinhibition assays for factor XIII. A reference interval of 12.1-22.7 U/l was established; at optimal conditions, the variance of method was < 3% within this range. The method has several theoretical and practical advantages over traditional determinations of factor XIII.

L3 ANSWER 15 OF 18 FROSTI COPYRIGHT 2003 LFRA
AN 386042 FROSTI
TI Suppression of surimi gel setting by transglutaminase inhibitors.
AU Kumazawa Y.; Numazawa T.; Seguro K.; Motoki M.
SO Journal of Food Science, ***1995*** , 60 (4), 715-717+726 (20 ref.)
DT Journal
LA English

SL English
AB It has been proposed that transglutaminase plays a part in the gelation of salted meat paste and the polymerisation of myosin heavy chain (MHC) in fish surimi. This study monitored the setting of samples of salted meat paste prepared from high- and second-grade surimi. One sample contained EDTA, another ***ammonium*** chloride; both are ***transglutaminase*** inhibitors. The gel-strength, MHC cross-linking, and epsilon-(gamma-glutamyl)lysine content of the gels were determined. The results are examined in detail. The authors conclude that intrinsic transglutaminase plays an active role in the setting process.

L3 ANSWER 16 OF 18 FROSTI COPYRIGHT 2003 LFRA
AN 339810 FROSTI
TI Legumin as transglutaminase substrate for polymerisation and amine binding: effect of its conformation.
AU Larre C.; Chiarello M.; Alexandre M.C.; Chenu M.; Gueguen J.
SO Food proteins: structure and functionality., Published by: VCH Publishers, Weinheim, ***1993*** , 163-171 (18 ref.)
Schwenke K.D.; Mothes R.
ISBN: 3-527-30037-6
DT Conference Article
LA English
AB Consideration is given to the use of transferases for modifying the physicochemical and functional properties of seed proteins, and the effect of reactional pH on the conformation of legumin. Three types of reaction catalysed by ***transglutaminase*** were invested - release of ***ammonia*** , polymerisation, and amine incorporation.

L3 ANSWER 17 OF 18 IFIPAT COPYRIGHT 2003 IFI
AN 2829754 IFIPAT;IFIUDB;IFICDB
TI METHOD OF DETERMINATION OF CALCIUM; CALCIUM ACTIVATED ***TRANSGLUTAMINASE*** ACTS ON SUBSTRATE TO GENERATE ***AMMONIA*** ; CORRELATING AMOUNT OF AMMONIA GENERATED WITH AN AMOUNT OF CALCIUM
INF Fujita, Tsuyoshi, Osaka-fu, JP
Nishida, Hozumi, Osaka-fu, JP
Nonobe, Masatsugu, Hyogo-ken, JP
IN Fujita Tsuyoshi (JP); Nishida Hozumi (JP); Nonobe Masatsugu (JP)
PAF Oriental Yeast Co, Ltd, Tokyo, JP
PA Oriental Yeast Co., Ltd. (62289)
EXNAM Kight, John
EXNAM Leary, Louise
AG Browdy and Neimark
PI US 5618684 19970408 (CITED IN 002 LATER PATENTS)
AI US 1995-425972 19950420
XPD 8 Apr 2014
RLI US 1993-16143 19930205 CONTINUATION-IN-PART ABANDONED
PRAI JP 1992-56044 19920207
FI US 5618684 19970408
DT UTILITY
FS CHEMICAL
GRANTED
OS CA 126:290376
MRN 007503 MFN: 0842
CLMN 16
GI 5 Drawing Sheet(s), 5 Figure(s).
AB Calcium in a sample is brought into contact with a transglutaminase capable of being activated with calcium as an activating factor and the transglutaminase activity, which varies depending upon the calcium amount in the sample, is measured to thereby determine the calcium amount in the sample. By the method of the invention, accurate determination of calcium in various samples such as body fluids is possible without removal of proteins from them.
CLMN 16
GI 5 Drawing Sheet(s), 5 Figure(s).

L3 ANSWER 18 OF 18 WPIDS (C) 2003 THOMSON DERWENT
AN 1993-251306 [32] WPIDS
DNC C1993-111347
TI Calcium amt determn in samples, e.g. human serum - by determn. of variations in activity of calcium activatable trans glutaminase activation factor added to samples, avoiding protein removal.
DC B04 D16 J04
IN FUJITA, T; HAMASAKI, H; NONOBE, M; NISHIDA, H
PA (ORIY) ORIENTAL YEAST CO LTD
CYC 6
PI EP 555046 A1 19930811 (199332)* EN 9p <--

R: DE FR GB IT
JP 05219992 A 19930831 (199339) 5p <--
US 5618684 A 19970408 (199720) 11p <--
EP 555046 B1 19970730 (199735) EN 11p <--
R: DE FR GB IT
DE 69312518 E 19970904 (199741) <--
JP 3164165 B2 20010508 (200128) 5p
ADT EP 555046 A1 EP 1993-300744 19930202; JP 05219992 A JP 1992-56044 19920207; US 5618684 A CIP of US 1993-16143 19930205, US 1995-425972 19950420; EP 555046 B1 EP 1993-300744 19930202; DE 69312518 E DE 1993-612518 19930202, EP 1993-300744 19930202; JP 3164165 B2 JP 1992-56044 19920207
FDT DE 69312518 E Based on EP 555046; JP 3164165 B2 Previous Publ. JP 05219992
PRAI JP 1992-56044 19920207
AN 1993-251306 [32] WPIDS
AB EP 555046 A UPAB: 19931118
The amt. of calcium in a sample is determined by contacting with a transglutaminase activated by calcium, and measuring the transglutaminase activity. Measurement of the variation of transglutaminase activity is achieved by measuring the variation of a donor and/or an aceeptor which are substrates of ***transglutaminase*** . This is by measuring the ***ammonia*** and/or hydroxamic acid deriv. formed by the reaction. The donor is pref. Z-L-Gln-Gly, Z-L-Gln, Boc-L-Gly or Fmoc-L-Gln and the acceptor is n-propylamine, n-butylamine, n-amylamine, n-hexylamine, lysine or hydroxylamine.
USE/ADVANTAGE - Calcium can be determined rapidly and accurately. There is no need to remove proteins from the sample, which can be a live sample, e.g. human serum. The method can be used in clinical examinations, and is superior to conventional enzymatic determn. methods. The reagents used are also inexpensive.
Dwg.0/2
ABEQ JP 05219992 A UPAB: 19931123
The amt. of calcium in a sample is determined by contacting with a transglutaminase activated by calcium, and measuring the transglutaminase activity.
Measurement of the variation of transglutaminase activity is achieved by measuring the variation of a donor and/or an acceptor which are substrates of ***transglutaminase*** . This is by measuring the ***ammonia*** and/or hydroxamic acid deriv. formed by the reaction. The donor is pref. Z-L-Gln-Gly, Z-L-Gln, Boc-L-Gln or Fmoc-L-Gln and the acceptor is n-propylamine, n-butylamine, n-amylamine, n-hexylamine, lysine or hydroxylamine.
USE/ADVANTAGE - Calcium can be determined rapidly and accurately. There is no need to remove proteins from the sample, which can be a live sample, e.g. human serum. The method can be used in clinical examinations, and is superior to conventional enzymatic determn. methods. The reagents used are also inexpensive.
ABEQ US 5618684 A UPAB: 19970516
A method of determining the amount of calcium in blood serum, comprises: (1) providing a sample of blood serum; (2) bringing blood serum calcium in the sample of blood serum into contact with a transglutaminase capable of being activated with calcium to provide an activated transglutaminase; (3) allowing the activated transglutaminase to act on a substrate which is a mixture of a donor and an acceptor to generate NH3; and (4) measuring the activity of transglutaminase by detecting the amount of NH3 generated; and (5) determining the amount of calcium in the sample of blood serum by correlating the amount of NH3 generated with an amount of calcium.
Dwg.0/5
ABEQ EP 555046 B UPAB: 19970828
A method of determining the amount of calcium in blood serum, comprising the steps of: (1) providing a sample of blood serum; (2) bringing blood serum calcium in the sample of blood serum into contact with a transglutaminase capable of being activated with calcium to provide an activated transglutaminase; (3) allowing the activated transglutaminase to act on a substrate which is a mixture of a donor and an acceptor to generate NH3; (4) measuring the activity of transglutaminase by detecting the amount of NH3 generated; and (5) determining the amount of calcium in the sample of blood serum by correlating the amount of NH3 generated with an amount of calcium.
Dwg.0/2

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.42	88.98

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	[illegible].21

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=> e iwanij v, 1977/re
E1 4 IWANIJ V, 1975, V64, P572, J CELL BIOLOGY/RE
E2 1 IWANIJ V, 1975, V67, PA188, J CELL BIOLOGY/RE
E3 0 --> IWANIJ V, 1977/RE
E4 22 IWANIJ V, 1977, V80, P359, EUR J BIOCHEM/RE
E5 1 IWANIJ V, 1978, THESIS ROCKEFELLER U/RE
E6 1 IWANIJ V, 1979, V83, P430, J CELL BIOL/RE
E7 3 IWANIJ V, 1979, V83, PA430, J CELL BIOL/RE
E8 1 IWANIJ V, 1980, V87, PA 28, J CELL BIOL/RE
E9 1 IWANIJ V, 1980, V87, PA172, J CELL BIOL/RE
E10 1 IWANIJ V, 1980, V87, PA172, J CELL BIOL 2/RE
E11 1 IWANIJ V, 1982, V95, P723, J CELL BIOL/RE
E12 9 IWANIJ V, 1982, V95, P727, J CELL BIOL/RE

=> s e4
L4 22 "IWANIJ V, 1977, V80, P359, EUR J BIOCHEM"/RE
("IWANIJ V, 1977, V80, P359, EUR J BIOCHEM"/RE)

=> d bib abs 1-22

L4 ANSWER 1 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 1999:914756 SCISEARCH
GA The Genuine Article (R) Number: 257GP
TI Pellicle precursor proteins: Acidic proline-rich proteins, statherin, and histatins, and their crosslinking reaction by oral transglutaminase
AU Yao Y; Lamkin M S; Oppenheim F G (Reprint)
CS BOSTON UNIV, GOLDMAN SCH DENT MED, DEPT PERIODONTOL & ORAL BIOL, CABR W201, 700 ALBANY ST, BOSTON, MA 02118 (Reprint); BOSTON UNIV, GOLDMAN SCH DENT MED, DEPT PERIODONTOL & ORAL BIOL, BOSTON, MA 02118; BOSTON UNIV, SCH MED, DEPT BIOCHEM, BOSTON, MA 02118
CYA USA
SO JOURNAL OF DENTAL RESEARCH, (NOV 1999) Vol. 78, No. 11, pp. 1696-1703. Publisher: AMER ASSOC DENTAL RESEARCH, 1619 DUKE ST, ALEXANDRIA, VA 22314. ISSN: 0022-0345.
DT Article; Journal
FS LIFE; CLIN
LA English
REC Reference Count: 38
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Previous studies have demonstrated that whole saliva and pellicle formed in vitro from oral fluid contain covalently crosslinked salivary proteins. The purpose of this study was to determine which salivary proteins can act as substrates for transglutaminase, an enzyme responsible for the covalent crosslink reaction between a glutamine residue and a lysine residue. Transglutaminase was prepared from the pellet fraction of human whole saliva. Dansyl cadaverine (N-dansyl-1,5-diaminopentane) was us ed to study the reactivity of glutamine residues in acidic large and small proline-rich proteins, statherin, and the major histatins, whereas a glutamine-containing dansylated peptide was used to study the reactivity of lysine residues in these proteins. Crosslink formation was measured fluorometrically after the addition of fluorescent probe to the salivary protein substrate and transglutaminase. The covalent attachment of the fluorescent probe to salivary proteins was confirmed by SDS-PAGE. It was found that almost all of the lysines present in the acidic PRPs and statherin, and some of the lysines present in histatins, could participate in the crosslink reaction. Glutamine reactivity was also observed, but a maximum of only 14% of glutamine residues present in acidic PRPs and statherin participated in the crosslink formation. These results demonstrate that primary pellicle precursor proteins, acidic proline-rich proteins, statherin, and the major histatins are capable of undergoing crosslink reactions catalyzed by oral transglutaminase. This may enable other proteins in the oral cavity to be incorporated into the acquired enamel pellicle.

L4 ANSWER 2 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 96:276978 SCISEARCH
GA The Genuine Article (R) Number: UD170
TI AN INVESTIGATION INTO THE ACTION OF TRANSGLUTAMINASE ON HUMAN HAIR

AU GARDNER J M (Reprint); SWANSON P E; TORRESLOPEZ B V
CS DOW CHEM CO USA, CENT RES [redacted]EV, MIDLAND, MI, 48674 (Repri[redacted]
CYA USA
SO JOURNAL OF THE SOCIETY OF COSMETIC CHEMISTS, (JAN/FEB 1995) Vol. 46, No. 1, pp. 11-28.
ISSN: 0037-9832.
DT Article; Journal
LA ENGLISH
REC Reference Count: 49
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Enzymes may offer an attractive alternative to traditional chemical approaches in permanent modification or conditioning of hair. The goal of this research was to determine if glutamine residues on the surface of human hair were recognized as a substrate for guinea pig liver transglutaminase. Optical and isotope assays were developed and used to monitor specific activity. Traditional amine donor substrates were used in conjunction with control treatments and rinsing procedures to seek evidence of covalent modification.

No conclusive evidence was found for biocatalytic activity of transglutaminase with virgin hair. An estimate based on literature data from a nonsoluble glutamine substrate indicated that the detection limit of the isotope assay was approximately two orders of magnitude more sensitive than required to verify reaction. The results appear to contradict previous work in which it was thought that transglutaminase cross-links endogenous glut amine and lysine residues on the hair surface. Reaction with hair in the present work may have been limited by the presence of the proposed fatty acid layer (F-layer) on the hair surface. Future work with transglutaminase might be directed toward applications that do not require hair to donate endogenous residues to the reaction.

L4 ANSWER 3 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 87:456210 SCISEARCH
GA The Genuine Article (R) Number: J4101
TI PROTEIN ADSORPTION AT POLYMER SURFACES - A STUDY USING TOTAL INTERNAL-REFLECTION FLUORESCENCE
AU ANDERSON A B (Reprint); DARST S A; ROBERTSON C R
CS STANFORD UNIV, DEPT CHEM ENGN, STANFORD, CA, 94305 (Reprint)
CYA USA
SO ACS SYMPOSIUM SERIES, (1987) Vol. 343, pp. 306-323.
DT General Review; Bibliography; Journal
LA ENGLISH
REC Reference Count: 37

L4 ANSWER 4 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 87:61632 SCISEARCH
GA The Genuine Article (R) Number: F8534
TI IDENTIFICATION OF A SUBSTRATE SITE FOR LIVER TRANSGLUTAMINASE ON THE AMINOPROPEPTIDE OF TYPE-III COLLAGEN
AU BOWNESS J M (Reprint); FOLK J E; TIMPL R
CS UNIV MANITOBA, FAC MED, DEPT BIOCHEM, WINNIPEG R3E 0W3, MANITOBA, CANADA (Reprint); MAX PLANCK INST BIOCHEM, D-8033 MARTINSRIED, FED REP GER; NIDR, ORAL BIOL & PHYSIOL LAB, ENZYME CHEM SECT, BETHESDA, MD, 20892
CYA CANADA; GERMANY; USA
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1987) Vol. 262, No. 3, pp. 1022-1024.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 24

L4 ANSWER 5 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 85:700763 SCISEARCH
GA The Genuine Article (R) Number: AWM54
TI ONE-STEP PURIFICATION OF GUINEA-PIG LIVER TRANSGLUTAMINASE USING A MONOCLONAL-ANTIBODY IMMUNOADSORBENT
AU IKURA K (Reprint); SAKURAI H; OKUMURA K; SASAKI R; CHIBA H
CS KYOTO UNIV, FAC AGR, DEPT FOOD SCI & TECHNOL, KYOTO 606, JAPAN (Reprint)
CYA JAPAN
SO AGRICULTURAL AND BIOLOGICAL CHEMISTRY, (1985) Vol. 49, No. 12, pp. 3527-3531.
DT Article; Journal
FS LIFE; AGRI
LA ENGLISH
REC Reference Count: 23

L4 ANSWER 6 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 85:43502 SCISEARCH
GA The Genuine Article (R) Number: AAL98

TI PENETRATION OF C8 AND C9 IN THE C5B-9 COMPLEX ACROSS THE ERYTHROCYTE-MEMBRANE INTO [redacted] CYTOPLASMIC SPACE
AU WHITLOW M B (Reprint); RAMM [redacted] E; MAYER M M
CS JOHNS HOPKINS UNIV, SCH MED, DEPT MOLEC BIOL & GENET, SUBDEPT IMMUNOL, BALTIMORE, MD, 21205 (Reprint)
CYA USA
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1985) Vol. 260, No. 2, pp. 998-1005.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 52

L4 ANSWER 7 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 84:509452 SCISEARCH
GA The Genuine Article (R) Number: TK663
TI USE OF TRANSGLUTAMINASE - REVERSIBLE BLOCKING OF AMINO-GROUPS IN SUBSTRATE PROTEINS FOR A HIGH-YIELD OF SPECIFIC PRODUCTS
AU IKURA K (Reprint); GOTO M; YOSHIKAWA M; SASAKI R; CHIBA H
CS KYOTO UNIV, FAC AGR, DEPT FOOD SCI & TECHNOL, KYOTO 606, JAPAN (Reprint)
CYA JAPAN
SO AGRICULTURAL AND BIOLOGICAL CHEMISTRY, (1984) Vol. 48, No. 9, pp. 2347-2354.
DT Article; Journal
FS LIFE; AGRI
LA ENGLISH
REC Reference Count: 28

L4 ANSWER 8 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 84:390408 SCISEARCH
GA The Genuine Article (R) Number: TB301
TI PRODUCTION OF MONOCLONAL-ANTIBODIES TO GUINEA-PIG LIVER TRANSGLUTAMINASE
AU IKURA K (Reprint); YANAGAWA S; OKUMURA K; SASAKI R; CHIBA H
CS KYOTO UNIV, FAC AGR, DEPT FOOD SCI & TECHNOL, KYOTO 606, JAPAN (Reprint)
CYA JAPAN
SO AGRICULTURAL AND BIOLOGICAL CHEMISTRY, (1984) Vol. 48, No. 7, pp. 1835-1840.
DT Article; Journal
FS LIFE; AGRI
LA ENGLISH
REC Reference Count: 27

L4 ANSWER 9 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 83:72797 SCISEARCH
GA The Genuine Article (R) Number: QB351
TI PURIFICATION OF GUINEA-PIG LIVER TRANSGLUTAMINASE USING A PHENYLALANINE SEPHAROSE 4B AFFINITY COLUMN
AU BROOKHART P P; MCMAHON P L; TAKAHASHI M (Reprint)
CS COLL MED & DENT NEW JERSEY, RUTGERS MED SCH, DEPT PHYSIOL & BIOPHYS, PISCATAWAY, NJ, 08854
CYA USA
SO ANALYTICAL BIOCHEMISTRY, (1983) Vol. 128, No. 1, pp. 202-205.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 10

L4 ANSWER 10 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 82:162211 SCISEARCH
GA The Genuine Article (R) Number: NJ398
TI TRANSGLUTAMINASE MAY MEDIATE CERTAIN PHYSIOLOGICAL-EFFECTS OF ENDOGENOUS AMINES AND OF AMINE-CONTAINING THERAPEUTIC AGENTS
AU RUSSELL D H (Reprint); WOMBLE J R
CS UNIV ARIZONA, ARIZONA HLTH SCI CTR, DEPT PHARMACOL, TUCSON, AZ, 85724 (Reprint); UNIV ARIZONA, ARIZONA HLTH SCI CTR, DEPT SURG, TUCSON, AZ, 85724
CYA USA
SO LIFE SCIENCES, (1982) Vol. 30, No. 18, pp. 1499-1508.
DT General Review; Bibliography; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 72

L4 ANSWER 11 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 81:545646 SCISEARCH
GA The Genuine Article (R) Number: MR266
TI INCORPORATION OF AMINO-ACIDS INTO FOOD PROTEINS BY TRANSGLUTAMINASE
AU IKURA K (Reprint); YOSHIKAWA M; SASAKI R; CHIBA H

CS KYOTO UNIV, FAC AGR, DEPT FOOD SCI & TECHNOL, KYOTO 606, JAPAN (Reprint)
CYA JAPAN
SO AGRICULTURAL AND BIOLOGICAL CHEMISTRY, (1981) Vol. 45, No. 11, pp. 2587-2592.
DT Article; Journal
FS LIFE; AGRI
LA ENGLISH
REC Reference Count: 36

L4 ANSWER 12 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 81:448112 SCISEARCH
GA The Genuine Article (R) Number: MJ591
TI TRANSGLUTAMINASE-CATALYZED INCORPORATION OF PUTRESCINE INTO DENATURED CYTOCHROME-C - PREPARATION OF A MONOSUBSTITUTED DERIVATIVE REACTIVE WITH CYTOCHROME-C OXIDASE
AU BUTLER S J (Reprint); LANDON M
CS UNIV NOTTINGHAM, SCH MED, QUEENS MED CTR, DEPT BIOCHEM, NOTTINGHAM NG7 2UH, ENGLAND
CYA ENGLAND
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1981) Vol. 670, No. 2, pp. 214-221.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 30

L4 ANSWER 13 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 81:88414 SCISEARCH
GA The Genuine Article (R) Number: LD271
TI TRANSGLUTAMINASE MODIFIES THE CARBOXY-TERMINAL INTRACELLULAR REGION OF HLA-A-ANTIGENS AND HLA-B-ANTIGENS
AU POBER J S (Reprint); STROMINGER J L
CS HARVARD UNIV, BIOL LABS, CAMBRIDGE, MA, 02138
CYA USA
SO NATURE, (1981) Vol. 289, No. 5800, pp. 819-821.
DT Article; Journal
FS PHYS; LIFE
LA ENGLISH
REC Reference Count: 12

L4 ANSWER 14 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 81:43026 SCISEARCH
GA The Genuine Article (R) Number: KY786
TI POLYAMINE METABOLITES AND CONJUGATES IN MAN AND HIGHER ANIMALS - A REVIEW OF THE LITERATURE
AU AIGNERHELD R (Reprint); DAVES G D
CS OREGON GRAD CTR, DEPT CHEM & BIOCHEM SCI, BEAVERTON, OR, 97006 (Reprint)
CYA USA
SO PHYSIOLOGICAL CHEMISTRY AND PHYSICS, (1980) Vol. 12, No. 5, pp. 389-400.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 111

L4 ANSWER 15 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 81:15175 SCISEARCH
GA The Genuine Article (R) Number: KV979
TI CROSSLINKING OF SOYBEAN-7S AND SOYBEAN-11S PROTEINS BY TRANSGLUTAMINASE
AU IKURA K (Reprint); KOMETANI T; SASAKI R; CHIBA H
CS KYOTO UNIV, FAC AGR, DEPT FOOD SCI & TECHNOL, KYOTO 606, JAPAN (Reprint)
CYA JAPAN
SO AGRICULTURAL AND BIOLOGICAL CHEMISTRY, (1980) Vol. 44, No. 12, pp. 2979-2984.
DT Article; Journal
FS LIFE; AGRI
LA ENGLISH
REC Reference Count: 22

L4 ANSWER 16 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 81:6014 SCISEARCH
GA The Genuine Article (R) Number: KW031
TI THE COMPARATIVE ABILITY OF PLASMA AND TISSUE TRANSGLUTAMINASES TO USE COLLAGEN AS A SUBSTRATE
AU JELENSKA M M (Reprint); FESUS L; KOPEC M
CS INST NUCL RES, DEPT RADIOBIOL & HLTH PROTECT, DORODNA 16, PL-03195 WARSAW, POLAND (Reprint); DEBRECEN UNIV MED, SCH MED, DEPT CLIN CHEM, H-4012 DEBRECEN, HUNGARY
CYA POLAND; HUNGARY

SO BIOCHIMICA ET BIOPHYSICA ACTA, (1980) Vol. 616, No. 2, pp. 167-178.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 24

L4 ANSWER 17 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 80:338147 SCISEARCH
GA The Genuine Article (R) Number: KB527
TI CROSSLINKING OF CASEIN COMPONENTS BY TRANSGLUTAMINASE
AU IKURA K (Reprint); KOMETANI T; YOSHIKAWA M; SASAKI R; CHIBA H
CS KYOTO UNIV, FAC AGR, DEPT FOOD SCI & TECHNOL, KYOTO 606, JAPAN (Reprint)
CYA JAPAN
SO AGRICULTURAL AND BIOLOGICAL CHEMISTRY, (1980) Vol. 44, No. 7, pp. 1567-1573.
DT Article; Journal
FS LIFE; AGRI
LA ENGLISH
REC Reference Count: 29

L4 ANSWER 18 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 80:303376 SCISEARCH
GA The Genuine Article (R) Number: JY537
TI TRANSGLUTAMINASES
AU FOLK J E (Reprint)
CS NIDR, ENZYME CHEM SECT, BETHESDA, MD, 20205 (Reprint)
CYA USA
SO ANNUAL REVIEW OF BIOCHEMISTRY, (1980) Vol. 49, pp. 517-531.
DT General Review; Bibliography; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 92

L4 ANSWER 19 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 80:82823 SCISEARCH
GA The Genuine Article (R) Number: JF792
TI TOPOGRAPHY OF RHODOPSIN IN ROD OUTER SEGMENT DISK MEMBRANES - PHOTOCHEMICAL LABELING WITH N-(4-AZIDO-2-NITROPHENYL)-2-AMINOETHANESULFONATE
AU MAS M T; WANG J K; HARGRAVE P A (Reprint)
CS SO ILLINOIS UNIV, SCH MED, CARBONDALE, IL, 62901; SO ILLINOIS UNIV, DEPT CHEM & BIOCHEM, CARBONDALE, IL, 62901
CYA USA
SO BIOCHEMISTRY, (1980) Vol. 19, No. 4, pp. 684-692.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 57

L4 ANSWER 20 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 79:211398 SCISEARCH
GA The Genuine Article (R) Number: GU661
TI SPECIFIC FLUORESCENT LABELING OF CHICKEN MYOFIBRIL Z-LINE PROTEINS CATALYZED BY GUINEA-PIG LIVER TRANSGLUTAMINASE
AU GARD D L (Reprint); LAZARIDES E
CS CALTECH, DIV BIOL, PASADENA, CA, 91125 (Reprint)
CYA USA
SO JOURNAL OF CELL BIOLOGY, (1979) Vol. 81, No. 2, pp. 336-347.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 47

L4 ANSWER 21 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)
AN 78:404686 SCISEARCH
GA The Genuine Article (R) Number: FQ815
TI LOCALIZATION OF TRANSGLUTAMINASE IN ADULT CHICKEN EPIDERMIS
AU BURES D M; GOLDSMITH L A (Reprint)
CS DUKE UNIV, MED CTR, DIV DERMATOL, DURHAM, NC, 27710
CYA USA
SO ARCHIVES OF DERMATOLOGICAL RESEARCH, (1978) Vol. 262, No. 3, pp. 329-332.
DT Note; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 8

L4 ANSWER 22 OF 22 SCISEARCH COPYRIGHT 2003 ISI (R)

```
AN   78:227275  SCISEARCH
GA   The Genuine Article (R) Number: FA975
TI   TRANSGLUTAMINASE-CATALYZED INSERTION OF A FLUORESCENT-PROBE INTO
     PROTEASE-SENSITIVE REGION OF RHODOPSIN
AU   POBER J S; IWANIJ V; REICH E; STRYER L (Reprint)
CS   STANFORD UNIV, SCH MED, SHERMAN FAIRCHILD CTR, DEPT STRUCT BIOL, STANFORD,
     CA, 94305; YALE UNIV, DEPT MOLEC BIOPHYS & BIOCHEM, NEW HAVEN, CT, 06520;
     ROCKEFELLER UNIV, NEW YORK, NY, 10021
CYA  USA
SO   BIOCHEMISTRY, (1978) Vol. 17, No. 11, pp. 2163-2169.
DT   Article; Journal
FS   LIFE
LA   ENGLISH
REC  Reference Count: 39


=> index bioscience
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.24     191.15

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                     0.00      -5.21

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS,
       BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT,
       CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE,
       DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 10:54:12 ON 09 JAN 2003

64 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view
search error messages that display as 0* with SET DETAIL OFF.

=> s transglutaminase (10a) (ammonia or ammonium) not l1 and label?
   9 FILES SEARCHED...
         1   FILE CAPLUS
  26 FILES SEARCHED...
         1   FILE IFIPAT
  41 FILES SEARCHED...
  57 FILES SEARCHED...
         2   FILE USPATFULL

   3 FILES HAVE ONE OR MORE ANSWERS,   64 FILES SEARCHED IN STNINDEX

L5   QUE TRANSGLUTAMINASE (10A) (AMMONIA OR AMMONIUM) NOT L1 AND LABEL?

=> d rank
F1          2   USPATFULL
F2          1   CAPLUS
F3          1   IFIPAT


=> file f2-3
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     1.65     192.80

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                     0.00      -5.21

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COPYRIGHT (C) 2003 IFI CLAIMS(R) Patent Services (IFI)

=> s l5
L6          2 L5

=> dup rem l6
PROCESSING COMPLETED FOR L6
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L7 2 DUP REM L6 (0 DUPLICATES REMOVED)
ANSWER '1' FROM [redacted]LE CAPLUS
ANSWER '2' FROM [redacted]LE IFIPAT

=> d bib abs 1-2

L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 1965:418083 CAPLUS
DN 63:18083
OREF 63:3236h,3237a-b
TI Structural requirements of specific substrates for guinea pig liver transglutaminase
AU Folk, J. E.; Cole, P. W.
CS Natl. Insts. of Health, Bethesda, MD
SO J. Biol. Chem. (1965), 240(7), 2951-60
DT Journal
LA English
AB The structural requirements of substrates for guinea pig liver transglutaminase were investigated by means of a no. of synthetic glutamine peptides and glutamine derivs. as well as the A and B chains of oxidized insulin and glucagon. .alpha.-Carboxyl groups and .alpha.-amino groups in close structural vicinity to glutamine residues adversely influence the participation of these residues in the transfer and hydrolysis reactions catalyzed by transglutaminase. Glutamine residues in proteins and naturally occurring peptides probably function as substrates for this enzyme only when they are located in at least the third amino acid position from the N terminus and in at least the second amino acid position from the C terminus. The glutamine deriv. formed as the product in the transglutaminase-catalyzed replacement reaction of carbobenzyloxyglutaminylglycine with ethanolamine was identified as N-(.gamma.-glutamyl)amino-ethanol. This product was also identified in enzymic digests of several polypeptides that were ***labeled*** with ethanolamine-14C by means of transglutaminase. ***Ammonia*** and carbobenzyloxy-.alpha.-glutamylglycine were identified as the products of ***transglutaminase*** -catalyzed hydrolysis of carbobenzyloxyglutaminylglycine. Analyses of the chymotrypsin C digests of ethanolamine-14C- ***labeled*** polypeptides showed that this proteolytic enzyme catalyzes hydrolysis of peptide bonds at the .alpha.-carboxyl groups of N-(.gamma.-glutamyl)aminoethanol residues. This supports a previous postulate concerning the specificity of chymotrypsin C.

L7 ANSWER 2 OF 2 IFIPAT COPYRIGHT 2003 IFI
AN 10043969 IFIPAT;IFIUDB;IFICDB
TI METHOD FOR ISOTOPE ***LABELING*** OF PROTEIN WITH ENZYME; REACTING TRANSFERASE OR TRANSGLUTAMINASE (CALCIUM INDEPENDENT/DEPENDENT) WITH PROTEIN (INSULIN, ALBUMIN, EGG WHITE LYSOZYME) TO ***LABEL*** CARBOXYAMIDE NITROGEN OF GLUTAMIC ACID RESIDUE
INF Shimba; Nobuhisa, Kawasaki-Shi, JP
Suzuki; Eiichiro, Kawasaki-Shi, JP
Yokoyama; Keiichi, Kawasaki-Shi, JP
IN Shimba Nobuhisa (JP); Suzuki Eiichiro (JP); Yokoyama Keiichi (JP)
PAF AJINOMOTO CO., INC., 15-1, Kyobashi 1-chome, chuo-ku, JP
PA Ajinomoto Co Inc JP (1352)
AG OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC FOURTH FLOOR, 1755 JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202, US
PI US 2001044127 A1 20011122
AI US 2001-850031 20010508
PRAI JP 2000-141152 20000515
FI US 2001044127 20011122
DT Utility; Patent Application - First Publication
FS CHEMICAL
APPLICATION
CLMN 15
GI 10 Figure(s).
FIG. 1 represents a schematic diagram illustrating the process for 15N- ***labeling*** of carboxyamide nitrogen atom on a glutamine residue. In this figure, R1 represents a peptide chain, an Nterminal amino acid residue or a hydrogen atom; and R2 represents a peptide chain, a C-terminal amino acid residue or a hydroxyl group.
FIG. 2a represents a 1H NMR spectrum of 15N- ***labeled*** CBZ-Gln-Gly.
FIG. 2b represents a HSQC spectrum of 15N- ***labeled*** CBZ-Gln-Gly.
FIG. 3 represents a HSQC spectrum of 15N- ***labeled*** insulin B-chain.
FIG. 4a represents a HSQC spectrum of 15N- ***labeled*** insulin Achain.
FIG. 4b represents a 15N-edited NOESY spectrum of 15N- ***labeled***

insulin A-chain.
FIG. 5 represents a HSQC s trum of 15N- ***labeled*** ine serum albumin.
FIG. 6a represents a HSQC spectrum of ovalbumin ***labeled*** with 15N in the presence of MTG.
FIG. 6b represents a HSQC spectrum of ovalbumin ***labeled*** with 15N in the presence of the transglutaminase from Guinea pig.
FIG. 7 represents a diagram on which the peak intensities of signals indicated by 6 in FIG. 6a, among the glutamine residues of ovalbumin on which the wild type or Ser type transglutaminase acts in the presence of 15NH4Cl, are plotted as a function of the reaction time.

AB The present invention provides a method for isotopically ***labeling*** a functional group possessed by an amino acid residue of a protein. The present invention also provides a protein whose functional group in an amino acid residue is isotopically ***labeled*** . A functional group in an amino acid residue of a protein is substituted with an isotope- ***labeling*** group derived from an isotope- ***labeling*** compound by making use of the action of an enzyme. In particular, the carboxyamide nitrogen atom in a glutamine residue of a protein is replaced with an isotopically ***labeled*** atom by acting a transglutaminase on the glutamine residue.

CLMN 15 10 Figure(s).
FIG. 1 represents a schematic diagram illustrating the process for 15N- ***labeling*** of carboxyamide nitrogen atom on a glutamine residue. In this figure, R1 represents a peptide chain, an Nterminal amino acid residue or a hydrogen atom; and R2 represents a peptide chain, a C-terminal amino acid residue or a hydroxyl group.
FIG. 2a represents a 1H NMR spectrum of 15N- ***labeled*** CBZ-Gln-Gly.
FIG. 2b represents a HSQC spectrum of 15N- ***labeled*** CBZ-Gln-Gly.
FIG. 3 represents a HSQC spectrum of 15N- ***labeled*** insulin B-chain.
FIG. 4a represents a HSQC spectrum of 15N- ***labeled*** insulin Achain.
FIG. 4b represents a 15N-edited NOESY spectrum of 15N- ***labeled*** insulin A-chain.
FIG. 5 represents a HSQC spectrum of 15N- ***labeled*** bovine serum albumin.
FIG. 6a represents a HSQC spectrum of ovalbumin ***labeled*** with 15N in the presence of MTG.
FIG. 6b represents a HSQC spectrum of ovalbumin ***labeled*** with 15N in the presence of the transglutaminase from Guinea pig.
FIG. 7 represents a diagram on which the peak intensities of signals indicated by 6 in FIG. 6a, among the glutamine residues of ovalbumin on which the wild type or Ser type transglutaminase acts in the presence of 15NH4Cl, are plotted as a function of the reaction time.

=> index bioscience
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	20.60	213.40

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.65	-5.86

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 10:57:20 ON 09 JAN 2003

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=> s transglutaminase (10a) (ammonia or ammonium) not (11 or 15)
1 FILE AGRICOLA
4 FILES SEARCHED...
1 FILE BIOSIS
5 FILE CAPLUS
15 FILES SEARCHED...
27 FILES SEARCHED...
1 FILE ESBIOBASE
1 FILE FROSTI
42 FILES SEARCHED...

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         1   FILE PASCAL
         1   FILE PROMT
  55 FILES SEARCHED...
         1   FILE SCISEARCH
         1   FILE USPATFULL
  61 FILES SEARCHED...

   9 FILES HAVE ONE OR MORE ANSWERS,   64 FILES SEARCHED IN STNINDEX

L8   QUE TRANSGLUTAMINASE (10A) (AMMONIA OR AMMONIUM) NOT (L1 OR L5)

=> d rank
F1           5   CAPLUS
F2           1   AGRICOLA
F3           1   BIOSIS
F4           1   ESBIOBASE
F5           1   FROSTI
F6           1   PASCAL
F7           1   PROMT
F8           1   SCISEARCH
F9           1   USPATFULL


=> file f1-8
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       2.20     215.60

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                       0.00      -5.86

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=> s l8
   4 FILES SEARCHED...
L9           12 L8

=> dup rem l9
PROCESSING COMPLETED FOR L9
L10           7 DUP REM L9 (5 DUPLICATES REMOVED)
                ANSWERS '1-5' FROM FILE CAPLUS
                ANSWER '6' FROM FILE FROSTI
                ANSWER '7' FROM FILE PROMT

=> d bib abs 1-7

L10  ANSWER 1 OF 7  CAPLUS  COPYRIGHT 2003 ACS          DUPLICATE 1
AN   1997:28196  CAPLUS
DN   126:73958
TI   Transglutaminase from Streptoverticillium ladakanum and application to
```

minced fish product
AU Tsai, Guo-Jane; Lin, Shang[redacted]y; Jiang, Shann-Tzong
CS Dep. Marine Food Sci., Nati[redacted] Taiwan Ocean Univ., Chi-lung, [redacted], Taiwan
SO Journal of Food Science (1996), 61(6), 1234-1238
CODEN: JFDSAZ; ISSN: 0022-1147
PB Institute of Food Technologists
DT Journal
LA English
AB The ***transglutaminase*** (TGase) from Streptoverticillium ladakanum was purified to electrophoretic homogeneity after ***ammonium*** sulfate fractionation and Blue Sepharose Fast Flow chromatog. The mol. wt. of the purified TGase was 30.5 kDa estd. by Superdex 75HR gel filtration, and 37.5 kDa by SDS-PAGE. This enzyme, with optima at pH at 6.0 and 50.degree.C was very stable at pH 5.0 ~ 7.0. It was strongly inhibited by PCMB, PMSF, Pb2+, Zn2+ and Cu2+, but not affected by EDTA and Ca2+. This suggested that the purified TGase was calcium-independent and its active center contained cysteine. It catalyzed the crosslinking of fish myosin heavy chain and substantially increased the gel strength of mackerel surimi.

L10 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2003 ACS
AN 2000:21868 CAPLUS
DN 132:92156
TI Activity-independent cell adhesion to tissue-type transglutaminase is mediated by .alpha.4.beta.1 integrin
AU Isobe, Takashi; Takahashi, Hiroo; Ueki, Shoko; Takagi, Junichi; Saito, Yuji
CS Dep. Biological Sciences, Tokyo Institute Technology, Faculty Bioscience Biotechnology, Yokohama, 226, Japan
SO European Journal of Cell Biology (1999), 78(12), 876-883
CODEN: EJCBDN; ISSN: 0171-9335
PB Urban & Fischer Verlag
DT Journal
LA English
AB Transglutaminases (TGases) are enzymes which catalyze cross-link formation between glutamine residues and lysine residues in substrate proteins. We have previously reported that one of the TGases, blood coagulation factor XIIIa (FXIIIa), is capable of mediating adhesion of various cells. In this paper, we report for the first time that tissue-type transglutaminase (TGc) also has cell adhesion activity. TGc-coated plastic surface promoted adhesion and spreading of cells in a TGc concn.-dependent manner. However, there are some obvious differences between cell adhesion mediated by TGc and FXIIIa. As was reported previously, the adhesion to FXIIIa is dependent on its TGase activity. In contrast, the TGc-mediated cell adhesion is independent of its TGase activity. (1) The modification of the active center cysteine with iodoacetamide blocked the enzyme activity without any effect on cell adhesion. (2) The addn. of Mg2+not induce the enzyme activity, but it was as effective as Ca2+ for cell adhesion. (3) The addn. of NH4+ inhibited the enzyme activity but did not affect the cell adhesion significantly. The integrins involved in these cell adhesions are quite different. In the case of FXIIIa, .alpha.v.beta.3, and .alpha.5.beta.1 integrins are involved and consequently the RGD peptide substantially inhibited the adhesion. On the other hand, the cell adhesion to TGc is mediated by .alpha.4.beta.1 integrin but not .alpha.5.beta.1; a CS-1 peptide, which represents the binding site of fibronectin to .alpha.4.beta.1 integrin, completely inhibited the cell adhesion to TGc. It is possible that TGc and FXIIIa may mediate cell adhesion under different physiol. and pathol. situations.
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS
AN 1997:262683 CAPLUS
DN 126:290376
TI Method of determination of calcium
IN Nonobe, Masatsugu; Nishida, Hozumi; Fujita, Tsuyoshi
PA Oriental Yeast Co., Ltd., Japan
SO U.S., 11 pp., Cont.-in-part of U.S. Ser. No. 16,143, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5618684	A	19970408	US 1995-425972	19950420
	JP 05219992	A2	19930831	JP 1992-56044	19920207
	JP 3164165	B2	20010508		

PRAI JP 1992-56044 A 19920207
US 1993-16143 B2 19930205
AB Calcium in a sample is brought into contact with a transglutaminase capable of being activated with calcium as an activating factor and the transglutaminase activity, which varies depending upon the calcium amt. in the sample, is measured to thereby det. the calcium amt. in the sample. By the method of the invention, accurate detn. of calcium in various samples such as body fluids, e.g., blood serum, is possible without removal of proteins from them. The transglutaminase reaction involves a donor, X-L-Gln-Y (where X = amino acid, peptide, or protective group at the N-terminal end and Y = amino acid, peptide, or H at the C-terminal end), and an acceptor, R-NH2 (where R is a compd. with .gtoreq.3 C atoms or OH).

L10 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS
AN 1995:753228 CAPLUS
DN 123:142196
TI Suppression of surimi gel setting by transglutaminase inhibitors
AU Kumazawa, Y.; Numazawa, T.; Seguro, K.; Motoki, M.
CS Food Res. Dev. Lab., Ajinomoto Co., Inc., Kawasaki, 210, Japan
SO Journal of Food Science (1995), 60(4), 715-17
CODEN: JFDSAZ; ISSN: 0022-1147
PB Institute of Food Technologists
DT Journal
LA English
AB Three types of salted meat paste (3% NaCl, 3% NaCl plus 0.66% NH4Cl or 3% NaCl plus 0.2% EDTA) were prepd. from high and second grade surimi, set at 30.degree.C up to 4 h, and subsequently heated at 85.degree.C for 30 min. The gel strength, crosslinking of myosin heavy chain (MHC) and .epsilon.-(.gamma.-glutamyl)lysine (.epsilon.-(.gamma.-Glu)Lys) content were detd. With extended setting time, gel strength, crosslinking of MHC and the content of a crosslinked product, .epsilon.-(.gamma.-Glu)Lys, increased markedly in the gel from the high grade surimi. Such changes were suppressed considerably in the presence of NH4Cl and EDTA and were not obsd. in the gel prepd. from second grade surimi. These results indicated an active participation of intrinsic transglutaminase in the setting process.

L10 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS
AN 1993:577126 CAPLUS
DN 119:177126
TI Transglutaminase activation for determination of calcium
IN Nonobe, Masatsuga; Hamasaki, Hozumi; Fujita, Tsuyoshi
PA Oriental Yeast Co., Ltd., Japan
SO Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 555046	A1	19930811	EP 1993-300744	19930202
EP 555046	B1	19970730		
R: DE, FR, GB, IT				
JP 05219992	A2	19930831	JP 1992-56044	19920207
JP 3164165	B2	20010508		
PRAI JP 1992-56044	A	19920207		

AB The activity of transglutaminase (I) is dependent on the amt. of calcium, and is therefore useful for calcium detn. The method involves measurement of ammonia and/or hydroxamic acid deriv. formation by I using a donor substrate (e.g. benzyloxycarbonyl-L-Gln-Gly, benzyloxycarbonyl-L-Gln, Boc-L-Gln, or Fmoc-L-Gln) and an acceptor substrate (e.g. n-propylamine, n-butylamine, n-amylamine, n-hexylamine, lysine, or hydroxylamine).

L10 ANSWER 6 OF 7 FROSTI COPYRIGHT 2003 LFRA
AN 564130 FROSTI
TI Surimi of fish species from the Gulf of Mexico: evaluation of the setting phenomenon.
AU Morales O.G.; Ramirez J.A.; Vivanco D.I.; Vazquez M.
SO Food Chemistry, 2001, (October), 75 (1), 43-48 (20 ref.)
Published by: Elsevier Science Ltd Address: PO Box 211, 1000 AE Amsterdam, The Netherlands Telephone: +31 (20) 4853757 Fax: +31 (20) 4853432 Email: nlinfo-f@elsevier.nl Web: www.elsevier.nl/locate/foodchem
ISSN: 0308-8146
DT Journal
LA English

SL English
AB. Atlantic croaker, Mexican [redacted] ounder and Northern kingfish a[redacted] abundant warm water fish species found in the Gulf of Mexico. These species currently have low commercial value, and might be processed to obtain surimi. A considerable biomass with appropriate mechanical properties for surimi gel is known to be present in these fish species. The influence of different heat treatments on surimi production utilizing these fish species as the raw material was examined. The effect of ***ammonium*** chloride and EDTA on the presence and activity of endogenous ***transglutaminase*** responsible for setting, as well as the effect of calcium chloride on the setting process, were investigated. Gels from these fish species were obtained by setting at 25 C for 3 hours followed by cooking at 90 C for 15 minutes or setting at 40 C for 30 minutes followed by cooking at 90 C for 15 minutes. The setting phenomenon was found to be induced at 40 C in the three fish species. Surimi gels from the three fish species showed different responses to the thermal treatments and additives used. Calcium chloride at 0.2% improved shear stress and shear strain in surimi gels from Atlantic croaker and Northern kingfish.

L10 ANSWER 7 OF 7 PROMT COPYRIGHT 2003 Gale Group

AN 96:164210 PROMT
TI ENZYMES:Transglutaminase Crosslinks Proteins
SO Food Ingredient News, (1 Mar 1996) pp. N/A.
ISSN: 1070-1788.
LA English
WC 212
FULL TEXT IS AVAILABLE IN THE ALL FORMAT
AB Transglutaminase acts on food proteins by catalyzing an acyl- transfer reaction. The enzyme causes the protein molecules to cross-link and polymerize. Specifically, epsilon-(gamma- glutamyl)lysyl peptide bonds result when the gamma-carboxyamide group of glutamine residues and the epsilon-amino group of lysine residues are acted on by the enzyme. The protein molecules become crosslinked with an epsilon-(gamma-glutamyl) lysine bridge.
Chiya Kuraishi of the Food Research and Development Labs at Ajinomoto Co., Inc. (1-1 Suzuki-cho, Kawasaki-ku, Kawasaki-shi, 210 Japan) has devised a fermentation procedure for mass production of transglutaminase. According to Kuraishi, this achievement marks the first such mass production method for commercialization of the enzyme.
One potential application of transglutaminase is to bind meat particles without the use of heat, salt, or phosphates. Another use would be to improve the elasticity and gel strength of certain food products by gelling the food proteins. Transglutaminase may be used in yogurt to reduce separation and enhance firmness.
Kuraishi's colleagues at the Ajinomoto laboratories--Katsuya Seguro, Noriki Nio, and Masao Motoki--determined some of the characteristics of the transglutaminase derived from a variant of Streptoverticillium mobaraense. ***Transglutaminase*** is active at 60C and at high concentrations of sodium, ***ammonium*** , and calcium chlorides. Most importantly to the food industry, protein gels and films can be made without heating.

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.12	261.77

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-9.12

STN INTERNATIONAL LOGOFF AT 11:01:42 ON 09 JAN 2003